MEDICAL EVENT REPORTS 2000 AND 2001

One of the goals of the NEPMU-2 Epidemiology Department is to provide timely feedback to users of the Navy Disease Reporting System (NDRS). These reports will be posted quarterly on our website to allow commands in our Area of Responsibility (AOR) to view the data. Data from NDRS is a tool for Operational Commanders to determine deployment readiness in terms of disease incidence.

For CY 2001 and 2001, approximately 83% of medical shore commands and 17% of the medical surface commands in the NEPMU-2 AOR used the NDRS. The ultimate goal is to have 100% reporting. Metrics then can be developed to measure preventive medicine interventions.

The following is a compilation of data provided by units in our AOR for CY 2000 and 2001. Table 1 provides the total numbers collected by CY. Table 2 shows the disease rates for selected reported events. (Rates were calculated by dividing the total reports by the estimated active duty population in the NEPMU2 AOR (271,572) and multiplying by 100,000.)

Table 1: Active Duty Confirmed Reports

Count of EpiEvent	CY 2000	CY 2001
EpiEvent	Total	Total
ANIMAL BITE	26	25
BITES, VENOMOUS ANIMAL	1	2
CAMPYLOBACTERIOSIS	1	5
CHLAMYDIA	2088	2256
COLD INJURY - HYPOTHERMIA	0	1
CRYPTOSPORIDIOSIS	0	2
DENGUE FEVER (SPECIFY TYPE)	0	3
EHRLICHIOSIS	0	1
ENCEPHALITIS (SPECIFIY TYPE IF KNOWN)	0	2
E. COLI 0157:H7 INFECTION	1	0
GIARDIASIS	2	4
GONORRHEA	498	504
GRANULOMA INGUINALE	1	0
HEAT EXHAUSTION	2	8
HEAT STROKE	1	2
HEPATITIS A - ACUTE, SYMPTOMATIC	1	1
HEPATITIS B - ACUTE, SYMPTOMATIC	11	14
HEPATITIS C - ACUTE, SYMPTOMATIC	8	8
HEPATITIS NOS	2	0
INFLUENZA (CONFIRMED)	0	10
LYME DISEASE	5	7
MALARIA, FALCIPARUM	1	1
MALARIA, UNSPECIFIED	2	1
MALARIA, VIVAX	1	1
MENINGITIS, ASEPTIC, VIRAL	4	11
MENINGITIS, BACTERIAL	0	1
MENINGOCOCCAL MENINGITIS	0	2
MENINGOCOCCEMIA	1	4
OCCUPATIONAL EXPOSURE TO BLOOD-BORNE PATHOGEN	12	1
ROCKY MOUNTAIN SPOTTED FEVER	4	0
SALMONELLOSIS	4	6
SHIGELLOSIS	0	1
STREPTOCOCCAL DISEASE, GP A	3	6
SYPHILIS, LATENT	6	4
SYPHILIS, PRIMARY/SECONDARY	7	14

TB, ACTIVE PULMONARY	0	6
TB ABSCESS SPINAL CORD	1	0
URETHRITIS (NON-GONOCOCCAL)	318	181
VACCINE RELATED ADVERSE EVENT	1	0
VARICELLA (CHICKEN POX, ACTIVE DUTY ONLY)	13	17
ANY UNUSUAL OCCURRENCE NOT LISTED	0	9
	3026	3121

Table 2: Medical Event Reports Highlights (Active Duty Only) Rates per 100,000 population within NEPMU2 AOR		
Sexually Transmitted Diseases	2000	2001
CHLAMYDIA	768.9	830.7
GONORRHEA	183.4	185.6
URETHRITIS (NON-GONOCOCCAL)	117.1	66.6
SYPHILIS (ALL STAGES)	4.8	6.6
Vector Borne Diseases, Zoonoses, and Animal Bites		
ANIMAL BITES	9.9	9.9
DENGUE FEVER	0.0	0.7
EHRLICHIOSIS	0.0	0.4
LYME DISEASE	1.8	2.6
MALARIA	1.5	1.1
ROCKY MOUNTAIN SPOTTED FEVER	1.5	0.0
Enteric Diseases		
CAMPYLOBACTERIOSIS	0.4	1.8
CRYPTOSPORIDIOSIS	0.0	0.4
E. COLI 0157:H7 INFECTION	0.0	0.7
GIARDIASIS	0.7	1.5
SALMONELLOSIS	1.5	2.2
SHIGELLOSIS	0.0	0.4
Other Communicable Diseases		
VIRAL HEPATITIS (all types)	8.1	8.5
MENINGITIS (bacterial & viral)	1.8	6.6
TUBERCULOSIS DISEASE	0.4	2.2
VARICELLA (CHICKEN POX)	4.8	6.3

Sexually Transmitted Diseases

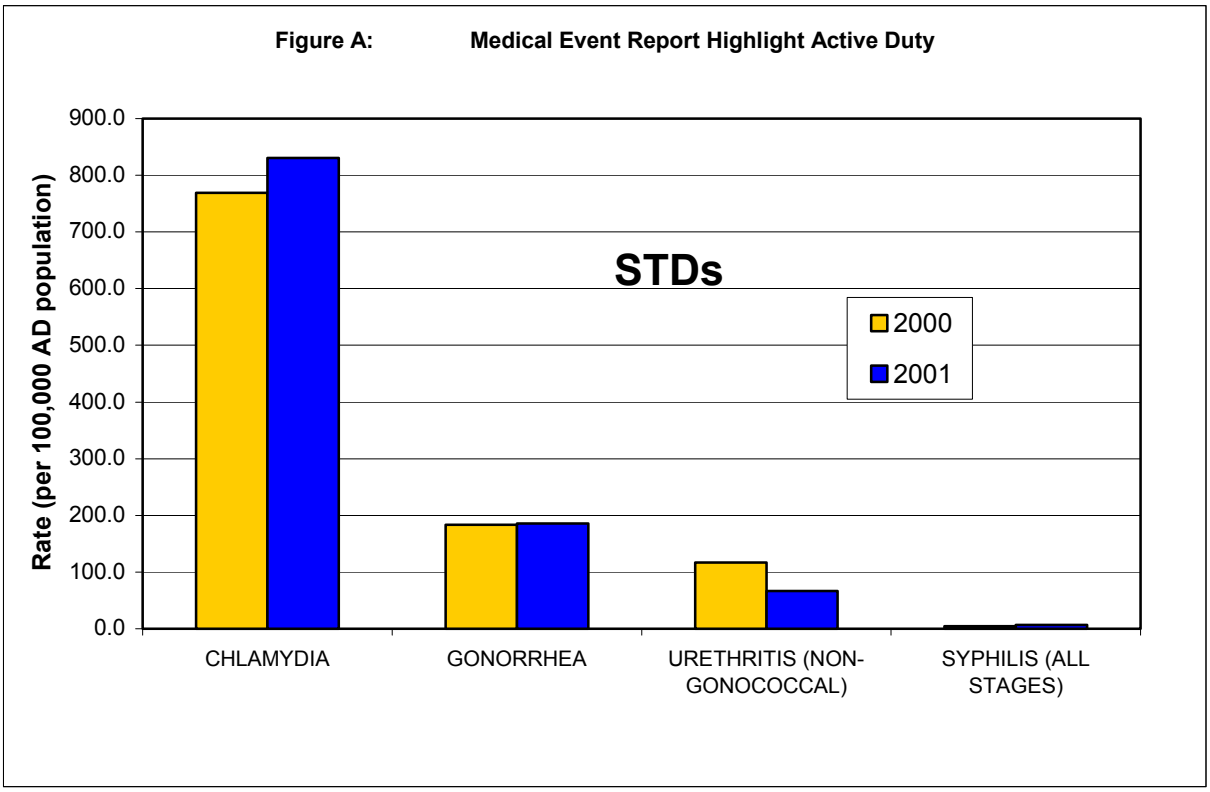
For 2000 and 2001, respectively, 96% and 95% of the confirmed reports for active duty were Sexually Transmitted Diseases (STDs). Figure A pictorially shows the rates listed in Table 2. These high numbers likely reflect both an increased awareness that these diseases are reportable, as well as the continued expansion of STD screening programs. STDs can lead to chronic pelvic pain and infertility, and can facilitate the transmission of HIV, which is a fatal disease with no cure. Because of these enormous health consequences, STDs cause decreased mission readiness. STDs also may cause emotional and family disturbances due to the stigma of the diseases. This too will lead to mission degradation. Screening for, treatment of, and education of the patients regarding STDs are vital elements in decreasing this cause of morbidity in the Navy/Marine Corps.

Reporting of STDs is important to gain control of this group of diseases. By regularly reporting, the actual numbers of cases can be determined. Prevention efforts can be designed and implemented and continually monitored by the use of STD reports. If prevention actions are effective, the number of STD reports should decline.

When comparing the two years, both chlamydia and syphilis rates increased. Again, this may signify increased reporting awareness; however, continued surveillance is important. Gonorrhea rates in the Navy appear to have remained unchanged, while non-gonococcal urethritis rates decreased dramatically.

NOTE: Future reports on this website will take a more detailed look at STD rates in the Navy and Marine Corps by comparing gender and State.

Figure A: Medical Event Report Highlight Active Duty



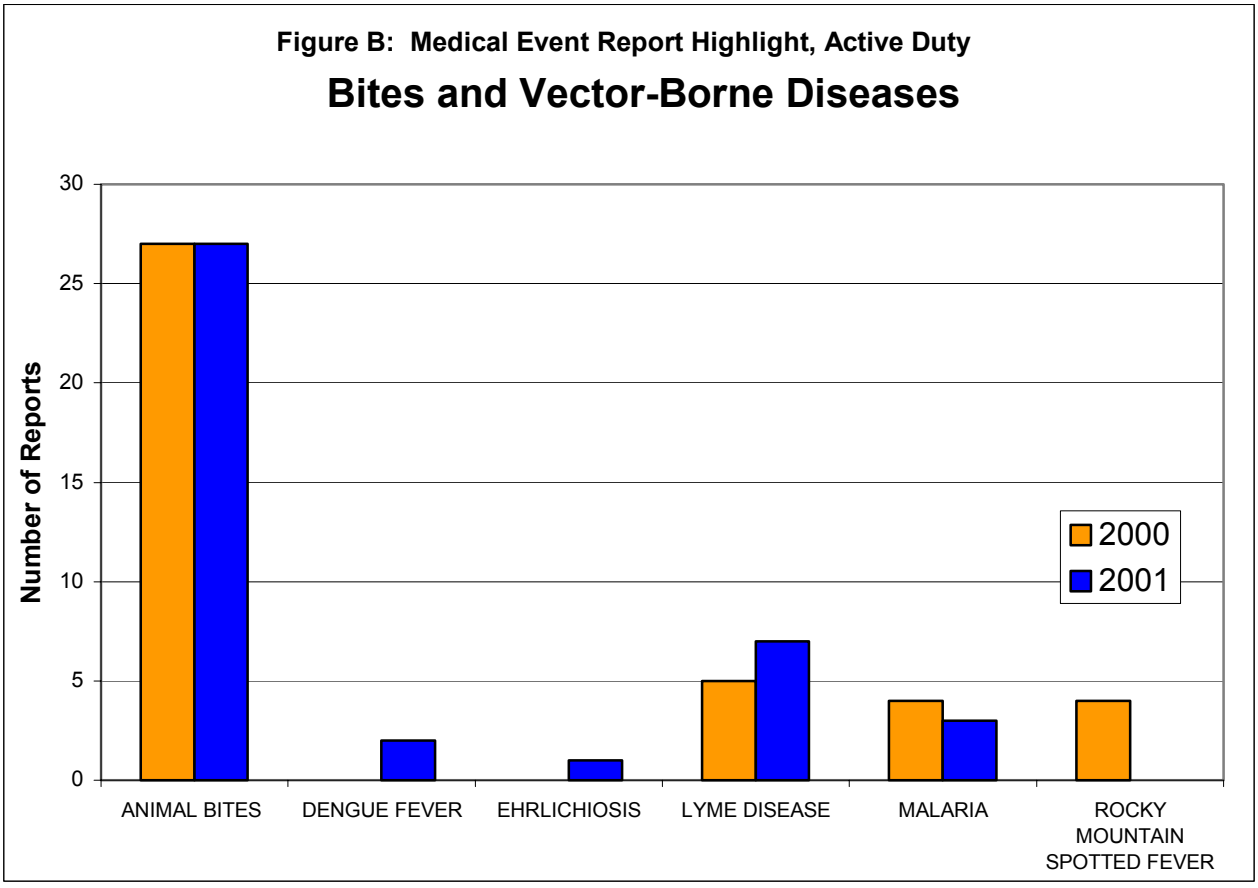
Animal Bites:

The number of animal bites has remained unchanged. Most reported bites were for known pets, so Human Rabies Immune Globulin injection was not necessary. It is important to keep in mind that any wild or unknown domestic animal has the potential to transmit rabies. Although rabies in humans in the US is rare, there are approximately 7,500 -10,000 annual reports of rabid animals, mostly in wild mammals. Reinforcement of the policy "do not play with the animals" should be continued, particularly in deploying forces. For more information about rabies in animals and humans, please visit the following website:
http://www.cdc.gov/ncidod/dvrd/kidsrabies

Vector-borne Diseases

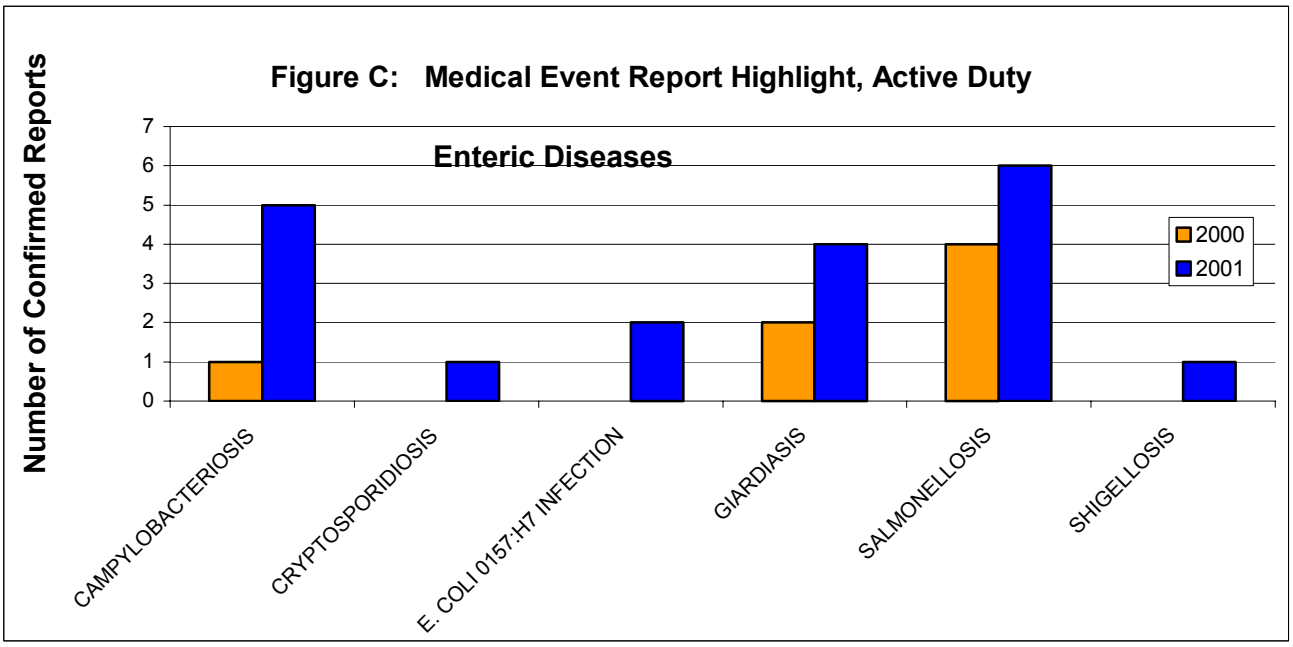
Less than 1% of reported events for CY 2000 and 2001 were for vector-borne diseases. These diseases, which include dengue, Lyme disease, Rocky Mountain Spotted-Fever and malaria, are rare in the U.S. All of these diseases are preventable through precautions known as "personal protective measures" - (use of DEET, wearing long sleeves and long pants, avoiding being outside at heavy biting times, such as dusk and dawn). Although a Lyme disease vaccine exists and malaria chemoprophylaxis is available, many vector-borne disease cannot be prevented by a vaccine or pill, nor cured once an individual is infected. The use of personal protective measures is the most reliable way to prevent these diseases and maintain operational readiness.

Figure B: Medical Event Report Highlight, Active Duty



Enteric Diseases

Few reports were obtained on enteric diseases. Most cases of enteric diseases are viral in origin and of short-duration, so patients are less likely to seek medical attention and diagnosis. However, the low numbers of reported disease may indicate that troops are following Force Health Protection measures and emphasizing food/water awareness when deploying to other countries. Additional preventive measures include washing hands with soap and water, drinking only bottled or boiled water or carbonated beverages, avoiding tap water and ice from local foreign restaurants, and eating only thoroughly cooked food or fruits and vegetables you have peeled yourself. Most enteric illnesses are not life-threatening, but can cause significant mission degradation if large numbers of a unit are incapacitated at one time. Monitoring for these illnesses keeps us alert to potential foodborne outbreaks.

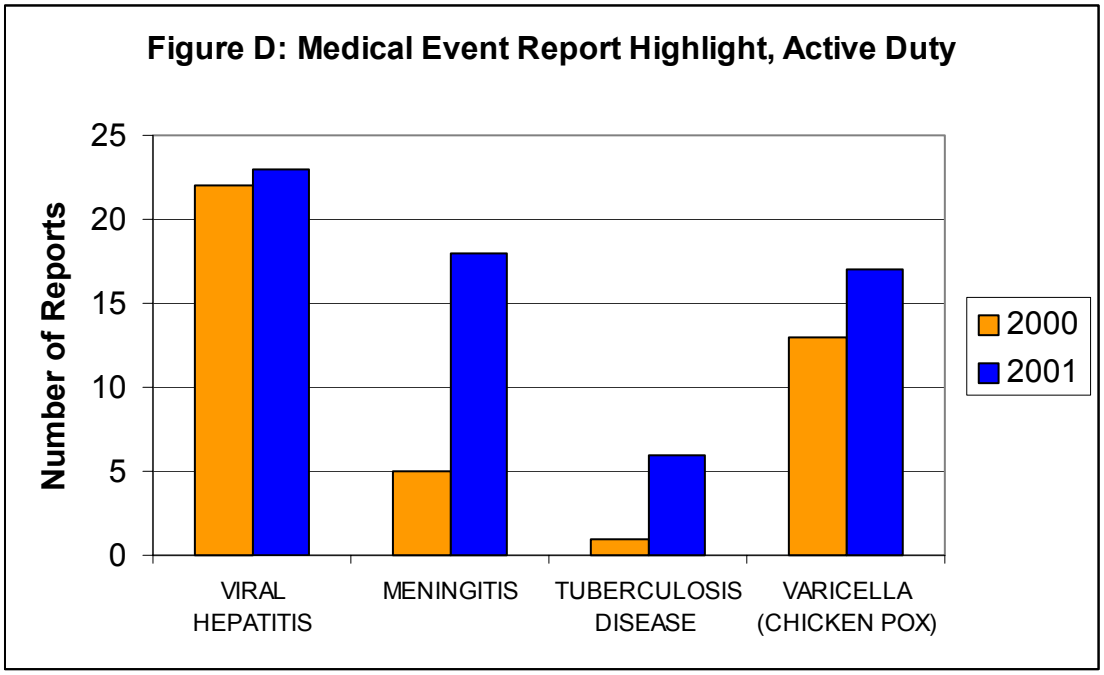


Other Communicable Diseases

Hepatitis (all types) The number of viral hepatitis cases remained unchanged from CY 2000 and 2001. Of the cases reported, 50-60% were confirmed as Hepatitis B. Although reported cases of acute Hepatitis B have decreased in the US civilian population during this past decade, case numbers have remained unchanged in the US Navy population. The US Navy is well below the civilian Healthy People 2010 objective of 15-24 cases/100,000. There was only one Hepatitis A case in 2000 and 2001. Numbers are expected to be low as the Hepatitis A vaccination is mandatory for all active duty Navy/Marine Corps members.

Meningitis: Most cases of meningitis in both CY 2000 and 2001 were due to viral infections (i.e. aseptic meningitis). Viral meningitis is generally less severe and resolves without specific treatment, while bacterial meningitis can be quite severe and may result in brain damage, hearing loss, or learning disability. For bacterial meningitis, it is also important to know which type of bacteria is causing the meningitis because antibiotics can prevent some types from spreading and infecting other people. Before the 1990s, *Haemophilus influenzae* type b (Hib) was the leading cause of bacterial meningitis, but new vaccines have reduced the occurrence of invasive disease due to *H. influenzae*. Today, *Streptococcus pneumoniae* and *Neisseria meningitidis* are the leading causes of bacterial meningitis. Two cases of meningococcal meningitis occurred in 2001. This computes to a rate of 0.73/100,000, which compares to the US average of 0.87/100,000. Neither case had received the meningococcal vaccine.

To learn more about meningococcal disease, please go to the following website:
http://www.cdc.gov/epo/dih/ddm/sset_men.htm



Tuberculosis: Active pulmonary tuberculosis disease increased from 2000 to 2001. However, compared to the US rate (6.4 cases/100,000), the US Navy community rate is low. This is due to the successful Navy TB control program that calls for annual testing of those in operational units who are at increased risk of exposure, and annual required reporting.

Varicella (Chicken pox): Varicella is not a nationally notifiable disease; however, in the US Navy, Varicella is a reportable event in active duty members. The number of active duty Varicella cases increased between 2000 and 2001. There were no deaths. The disease is highly infectious and requires patient to be isolated from the general public for at least 5 days after the rash appears. Although varicella has a low fatality rate, the lost workdays are substantial and can lead to degraded mission readiness. A live varicella vaccine has been available in the US since 1995, and currently Navy/Marine Corps standards require personnel to receive the 2-dose series or have a past history of chicken pox. Continued surveillance on this disease will be important to monitor the impact of this vaccination program.

Summary

Medical event reporting through NDRS continues to be important to the mission readiness of the US Navy. Timely monitoring for mission-degrading diseases and conditions can help identify conditions early. Early identification can lead to quick preventive measures that can help prevent further spread of disease among the troops. Disease reports are vital in the prevention process, which begins with knowing how large the problem is and where and why they have occurred. These questions are answered by gathering data from all area commands and analyzing and communicating that information back to the original reporters.

In this prevention process, strong leadership, innovative thinking, and collaboration among different stakeholders are required. The additional investment of time and effort will be negligible, when compared with the high return on the investment - a healthier force and increased mission capabilities.